What is claimed is:

1. A method of performing a thermal surgical procedure, comprising:

identifying biological material to undergo the thermal surgical procedure;

contacting the biological material with an inflammation inducing composition, wherein inflammation is induced in at least a portion of the identified biological material; and

adjusting the temperature of the identified biological material, wherein at least a portion of the biological material is destroyed after undergoing the thermal surgical procedure.

2. The method claim 1 wherein adjusting the temperature comprises lowering the temperature below a physiological temperature of the biological material.

3. The method claim 1 wherein adjusting the temperature comprises raising the temperature above a physiological temperature of the biological material.

4. The method of claim 1 wherein the biological material is selected from the group consisting of cells, tissues, and combinations thereof.

5. The method of claim 4 wherein the cells are tumor cells.

6. The method of claim 4 wherein the tissues are selected from the group consisting of tumor tissues, liver tissue, prostate tissue, breast tissue, kidney tissue, vascular tissue, gastrointestinal tissue, muscle tissue, skin tissue, connective tissues, and combinations thereof.

7. A composition comprising at least one compound effective for inducing an inflammatory response in biological material identified to undergo a thermal surgical procedure.

8. The composition of claim 7 wherein the at least one compound effective for inducing an inflammatory response is selected from the group consisting of at least

one virus, at least one bacterium, ethanol, cytokines, interleukins, chemokines, oxygen-free radicals, bacterial lipopolysaccharides, and combinations thereof.

9. The composition of claim 8 wherein the cytokine is selected from the group consisting of TNF-alpha, truncated versions of TNF-alpha, and combinations thereof.

10. The composition of claim 8 wherein the interleukin is selected from the group consisting of IL- beta, IL-8, and combinations thereof.

11. The composition of claim 7 further comprising a pharmaceutically acceptable carrier.

12. The composition of claim 11, wherein the pharmaceutically acceptable carrier is selected from the group consisting of a saline solution, encapsulation in microbeads, encapsulation in nanobeads, retroviral gene therapy, impregnated gelfoam, and combinations thereof.

13. The composition of claim 7 further comprising a compound selected from the group consisting of a buffering agent, a chemotherapeutic agent, a salt, a contrast agent, a fluorescent marker, an impedance metric device, ultrasound contrast agents, and combinations thereof.

14. A system for inducing inflammation in biological material identified to undergo a thermal surgical procedure, comprising:

a composition comprising at least one compound effective for inducing inflammation in at least a portion of the biological material; and

means for delivering the composition to a least a portion of the biological material.

15. The system of claim 14 wherein the composition further comprises a pharmaceutically acceptable carrier.

16 The system of claim 14 wherein the means for delivering the composition comprises a catheter comprising a lumen, and further wherein the composition is capable of being delivered through the lumen of the catheter.

17. The system of claim 14 further comprising means effective to remove thermal energy from at least a portion of the biological material at a rate sufficient to cause the biological material to be cooled to a temperature below a physiological temperature of the biological material.

18. The system of claim 14 further comprising means effective to supply thermal energy to at least a portion of the biological material at a rate sufficient to cause the biological material to be heated to a temperature above a physiological temperature of the biological material.

19. The system of claim 17 wherein the means effective to remove thermal energy from at least a portion of the biological material comprises a probe.

20. The system of claim 18 wherein the means effective to supply thermal energy to at least a portion of the biological material comprises a probe.

21. A kit for use in a thermal surgical procedure comprising:
a thermal surgical probe adapted to transfer thermal energy; and
a composition comprising at least one compound effective for inducing an inflammatory response in biological material identified to undergo a thermal surgical procedure.

22. The kit of claim 21 wherein the composition comprises a compound selected from the group consisting of at least one virus, at least one bacterium, ethanol, cytokines, interleukins, chemokines, oxygen-free radicals, bacterial lipopolysaccharides, and combinations thereof.

23. The kit of claim 22 wherein the cytokine is selected from the group consisting of TNF-alpha, truncated versions of TNF-alpha, and combinations thereof.

24. The kit of claim 22 wherein the interleukin is selected from the group consisting of IL- beta, IL-8, and combinations thereof.

25. The kit of claim 21 wherein the composition further comprises a pharmaceutically acceptable carrier.

26. The kit of claim 21 wherein the probe comprises a catheter.

27. The kit of claim 21 wherein the probe comprises a hollow needle.

28. The kit of claim 21 wherein the probe comprises a cryoprobe.

29. The kit of claim 21 wherein the probe comprises an implantable device.

30. The kit of claim 21 further comprising means for delivering the composition.

31. The kit of claim 30 wherein the means for delivering the composition is adapted to transfer thermal energy.